



NORTH CAROLINA OFFICE OF EMERGENCY MEDICAL SERVICES
DIVISION OF HEALTH SERVICE REGULATION • DEPARTMENT OF HEALTH & HUMAN SERVICES

Emergency Medical Technician-Intermediate (EMT-I) Education

EMT-I EDUCATIONAL PROGRAM REQUIREMENTS

1. The EMT-I educational program must be conducted by an approved Advanced Educational Institution as defined in the rules of the NC Medical Care Commission.
2. The lead instructor for the EMT-I educational program must be a NC credentialed Level II EMS Instructor at the EMT-I or EMT-Paramedic level as defined in the rules of the NC Medical Care Commission.
3. The curriculum for the EMT-I educational program shall be selected objectives identified from the 1998 Release of the United States Department of Transportation (US DOT) National Highway Traffic Safety Administration (NHTSA) EMT-Paramedic Course: National Standard Curriculum.
4. The evaluation check sheets for verification of student independent-skill mastery shall meet the minimum criteria of those developed and maintained by the National Registry of Emergency Medical Technicians specific to the independent skills learned during each specific educational module.
5. The advanced educational institution must maintain all student records that document:
 - a. Compliance with the student prerequisite of a high school diploma or general education development (GED) diploma.
 - b. Reading comprehension and English language skills on the post-secondary level.
 - c. Compliance with the mathematical skills on the high school grade level.
 - d. Successful completion of an EMT educational program.
 - e. Any learning disabilities that may qualify the student for special consideration by the Office of EMS in the written credentialing examination.
 - f. Student attendance in the classroom, clinical, and field internship components of the educational program.
 - g. Successful completion of all classroom components of the program, including written examination scores, independent-skills evaluation check sheets and scope-of-practice evaluation check sheets.
 - h. Skills competency in the clinical and field internship educational components.
 - i. Recommendation by the lead instructor for participation in clinical and field internship.
6. The advanced educational institution must have access to clinical education and field internship sites consistent with the scope of practice level of the EMT-I student for a sufficient number of contact hours to ensure competency on the skills required for successful program completion. The approved educational institution shall have written agreements with these sites.

EMT-I STUDENT PRE / CO-REQUISITES

1. Successful completion of all EMT educational requirements, before participating in the clinical education and field internship components of the EMT-I educational program.
2. High school or general education development (GED) diploma. This may be required as either a prerequisite or co-requisite of the educational program.
3. Successful completion of an entrance exam assessing basic reading comprehension and English language writing skills on a post-secondary level. Examples of acceptable demonstration of this ability include
 - placement into, or successful completion of, a college-level reading and English language writing course. Developmental or remedial courses will not satisfy this requirement.
 - a reading and writing score of 41 or higher on the ASSET[®] placement exam.
 - a reading score of 81 or higher and a writing score of 70 or higher on the COMPASS[®] placement exam.
 - ranking as “post high school” on the Health Occupation Basic Entrance Test (HOBET).

An educational institution should assess the student’s basic reading comprehension and language skills before the student enters the EMT-I educational program. If the competence of the student falls below the required level, the student should be encouraged to improve those skills before pursuing an EMT-I credential. An educational institution is not required to enroll a student whose skills do not meet the required level. However, if the institution chooses to enroll students below these basic skill levels, it is the institution’s responsibility to provide individual tutoring, provide remedial education, or require co-requisite course work to improve the student’s basic reading comprehension and language skills prior to completion of the EMT-I educational program.

4. Demonstration of mathematical skills at a minimum at the high school grade level. Examples of acceptable demonstration of this ability include
 - successful completion of a MAT 060 course, or placement into a MAT 070 course.
 - successful completion of a college-level algebra course.
 - a score of 39 or higher on the pre-algebra portion of the ASSET[®] placement exam.
 - a score of 45 or higher on the pre-algebra portion of the COMPASS[®] placement exam.
 - ranking as “high school” on the Health Occupation Basic Entrance Test (HOBET).

An educational institution should assess the student’s basic mathematical skills before the student enters the EMT-I educational program. If the competence of the student falls below this level, the student should be encouraged to improve those skills before pursuing an EMT-I credential. An educational institution is not required to enroll a student whose skills do not meet the required level. However, if the institution chooses to enroll students below these basic skill levels, it is the institution’s responsibility to provide individual tutoring, provide remedial education, or require co-requisite course work to improve the student’s mathematical skills prior to completion of the EMT-I educational program.

5. Although not required, it is recommended for students to have at least one year of active prehospital EMS experience.

EMT-I EDUCATIONAL PROGRAM STRUCTURE

MODULE 1: PREPARATORY

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------------|---|--|--------------------------|
| 1-1 | EMS Systems / Roles & Responsibilities | 1-1.1 – 1-1.46 | 3.0 |
| 1-2 | The Well Being of the Paramedic | 1-2.1 – 1-2.46 | 4.0 |
| 1-3 | Illness & Injury Prevention | Not required | 0.0 |
| 1-4 | Medical / Legal Issues | 1-4.1 – 1-4.35 | 3.0 |
| 1-5 | Ethics | 1-5.1 – 1-5.11 | 2.0 |
| 1-6 | General Principles of Pathophysiology | 1-6.1 – 1-6.2; 1-6.4; 1-6.10 – 1-6.12; 1-6.17 – 1-6.18; 1-6.26; 1-6.31 | 6.0 |
| 1-7 | Pharmacology | 1-7.1 – 1-7.31 | 20.0 |
| 1-8 | Venous Access / Medication Administration | 1-8.1 – 1-8.8; 1-8.10 – 1-8.17; 1-8.19 – 1-8.34; 1-8.36 – 1-8.38; 1-8.40 – 1-8.43 | 24.0 |
| 1-9 | Therapeutic Communications | 1-9.1 – 1-9.21 | 3.0 |
| 1-10 | Life Span Development | Not Required | 0.0 |
| Module Totals | | | 65.0 |

NOTE: All topics marked as “0” hours should be covered in EMT courses. EMT-I education for these topics should not significantly differ from that of the EMT.

MODULE 2: AIRWAY

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------------|---------------------------------|--|--------------------------|
| 2-1 | Airway Management & Ventilation | 2-1.1 – 2-1.10; 2-1.12 – 2-1.40; 2-1.42 – 2-1- 64; 2-1.69; 2-1.73 – 2-1.89; 2-1.93 – 2-1.103; 2-1.104abcd; 2-1.105 – 2-1.106; 2-1.108 | 18.0 |
| Module Totals | | | 18.0 |

MODULE 3: PATIENT ASSESSMENT

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------------|------------------------------------|--------------------------|--------------------------|
| 3-1 | History Taking | Not Required | 0.0 |
| 3-2 | Techniques of Physical Examination | 3-2.1 – 3-2.88 | 6.0 |
| 3-3 | Patient Assessment | Not Required | 0.0 |
| 3-4 | Clinical Decision Making | Not Required | 0.0 |
| 3-5 | Communications | Not Required | 0.0 |
| 3-6 | Documentation | Not Required | 0.0 |
| Module Totals | | | 6.0 |

NOTE: All topics marked as “0” hours should be covered in EMT courses. EMT-I education for these topics should not significantly differ from that of the EMT.

EMT-I EDUCATIONAL PROGRAM STRUCTURE

MODULE 4: TRAUMA

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------------|--|-------------------------------------|--------------------------|
| 4-1 | Trauma Systems and Mechanism of Injury | Not Required | 0.0 |
| 4-2 | Hemorrhage and Shock | 4-2.1 – 4-2.54 | 8.0 |
| 4-3 | Soft Tissue Trauma | Not Required | 0.0 |
| 4-4 | Burns | 4-4.25 – 4-4.30; 4-4.80 – 4-4.81 | 1.0 |
| 4-5 | Head and Facial Trauma | Not Required | 0.0 |
| 4-6 | Spinal Trauma | Not Required | 0.0 |
| 4-7 | Thoracic Trauma | Not Required | 0.0 |
| 4-8 | Abdominal Trauma | Not Required | 0.0 |
| 4-9 | Musculoskeletal Trauma | Not Required | 0.0 |
| Module Totals | | | 9.0 |

NOTE: All topics marked as “0” hours should be covered in EMT courses. EMT-I education for these topics should not significantly differ from that of the EMT.

MODULE 5: MEDICAL

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------|---------------------------|--|--------------------------|
| 5-1 | Pulmonary | 5-1.2 – 5-1.7; 5-1.10bcdefjk – 5-1.14 | 9.0 |
| 5-2 | Cardiology | 5-2.1 – 5-2.5; 5-2.8; 5-2.11 – 5-2.12; 5-2.14; 5-2.29 – 5-2.30; 5-2.53; 5-2.65 – 5-2.68; 5-2.70; 5-2.72 – 5-2.73; 5-2.75 – 5-2.77; 5-2.79 – 5-2.81; 5-2.84 – 5-2.89; 5-2.91 – 5-2.95; 5-2.121 – 5-2.125; 5-2.128 – 5-2.133; 5-2.150; 5-2.159; 5-2.162; 5-2.165; 5-2.168; 5-2.179 – 5-2.180; 5-2.184; 5-2.193 – 5-2.194; 5-2.201; 5-2.205ab; 5-2.206 – 5-2.207 | 12.0 |
| 5-3 | Neurology | 5-3.11 – 5-3.17; 5-3.82 – 5-3.83 | 2.0 |
| 5-4 | Endocrinology | 5-4.8 – 5-4.48 | 3.0 |
| 5-5 | Allergies and Anaphylaxis | 5-5.1 – 5-5.19 | 3.0 |
| 5-6 | Gastroenterology | Not Required | 0.0 |
| 5-7 | Renal / Urology | Not Required | 0.0 |

EMT-I EDUCATIONAL PROGRAM STRUCTURE

MODULE 5: MEDICAL(continued)

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------------|--------------------------------------|--------------------------|--------------------------|
| 5-8 | Toxicology | 5-8.40 – 5-8.56; 5-8.62 | 3.0 |
| 5-9 | Hematology | Not Required | 0.0 |
| 5-10 | Environmental Conditions | Not Required | 0.0 |
| 5-11 | Infectious and Communicable Diseases | Not Required | 0.0 |
| 5-12 | Behavioral and Psychiatric Disorders | Not Required | 0.0 |
| 5-13 | Gynecology | Not Required | 0.0 |
| 5-14 | Obstetrics | Not Required | 0.0 |
| Module Totals | | | 32.0 |

NOTE: All topics marked as “0” hours should be covered in EMT courses. EMT-I education for these topics should not significantly differ from that of the EMT.

MODULE 6: SPECIAL CONSIDERATIONS

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------------|--|--------------------------|--------------------------|
| 6-1 | Neonatology | Not Required | 0.0 |
| 6-2 | Pediatrics | Not Required | 0.0 |
| 6-3 | Geriatrics | Not Required | 0.0 |
| 6-4 | Abuse and Assault | Not Required | 0.0 |
| 6-5 | Patients with Special Challenges | Not Required | 0.0 |
| 6-6 | Acute Interventions for the Chronic Care Pt. | Not Required | 0.0 |
| Module Totals | | | 0.0 |

NOTE: All topics marked as “0” hours should be covered in EMT courses. EMT-I education for these topics should not significantly differ from that of the EMT.

MODULE 7: ASSESSMENT BASED MANAGEMENT

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------------|-----------------------------|---|--------------------------|
| 7-1 | Assessment Based Management | 7-1.1 – 7-1.19 (objectives 7-1.12 and 7-1.19 should include only abefhklo) | 12.0 |
| Module Totals | | | 12.0 |

MODULE 8: OPERATIONS

| SECTION | TITLE | LESSON OBJECTIVES | RECOMMENDED HOURS |
|----------------------|---------------------------------|--------------------------|--------------------------|
| 8-1 | Ambulance Operations | Not Required | 0.0 |
| 8-2 | Medical Incident Command | Not Required | 0.0 |
| 8-3 | Rescue Awareness and Operations | Not Required | 0.0 |
| 8-4 | Hazardous Materials Incidents | Not Required | 0.0 |
| 8-5 | Crime Scene Awareness | Not Required | 0.0 |
| Module Totals | | | 0.0 |

NOTE: All topics marked as “0” hours should be covered in EMT courses. EMT-I education for these topics should not significantly differ from that of the EMT.

EMT-I EDUCATIONAL PROGRAM STRUCTURE

MISCELLANEOUS

| | |
|------------------------------|-------------|
| Final Written Testing | 3.0 |
| Scope of Practice Evaluation | <u>15.0</u> |
| Module Totals | 18.0 |

The EMT-I outline contains a recommended minimum of 160 didactic hours, which includes time for classroom, lab, written and practical skills examinations and reviews, student remediation and scope of practice evaluation.

SCOPE OF PRACTICE PERFORMANCE EVALUATION COMPONENT

The scope of practice performance evaluation is scenario-based and must be consistent with the requirements detailed in the OEMS *Technical Scope of Practice Performance Evaluations* document.

CLINICAL EDUCATION COMPONENT

Clinical Prerequisites:

1. Successful completion of the didactic component of the program that includes the clinical skills to be performed by the student.
2. Recommendation of the educational program lead instructor.
3. Successful completion of all EMT educational requirements.

Clinical Requirements:

1. The length of the clinical education component of the EMT-I program is recommended at 48 hours, which includes time for student remediation, but should be based on the time required to verify competency in each of the skills required for successful program completion.
2. Clinical education must be conducted under the direct supervision of approved preceptors in accordance with established preceptor guidelines.
3. A minimum of 24 hours shall be performed in a hospital emergency department.

CLINICAL EDUCATION COMPONENT

4. Other clinical areas may include:
 - Intensive Care Units
 - Operating Room / Recovery
 - Intravenous Team
 - Pediatric Unit
 - Labor / Delivery Unit
 - Psychiatric Unit or Crisis Center
 - Skilled Nursing Facilities
 - County Health Department
 - Physician's Office
 - Home Health Care
 - Specialty Care Transport Units
 - Any other medical facility deemed appropriate by the Educational Medical Advisor

FIELD INTERNSHIP COMPONENT

Field Internship Prerequisites:

1. Successful completion of the didactic component of the program that includes the clinical skills to be performed by the student.
2. Recommendation of the educational program lead instructor.
3. Successful completion of all EMT educational requirements.

Field Internship Requirements:

1. The length of the field internship education component of the EMT-I program is recommended at 48 hours, which includes time for student remediation, but should be based on the time required to verify competency in each of the skills required for successful program completion.
2. Field internship must be conducted under the direct supervision of approved preceptors in accordance with established preceptor guidelines.
3. Field internship must be performed with an EMS provider at or above the EMT-I level.

SUCCESSFUL SKILLS COMPLETION

To successfully complete the EMT-I program, the student must demonstrate competence on each of the following skills during the clinical education AND field internship educational components while in direct contact with patients. Clinical and field internship preceptors shall document the student's performance on all of the skills required in the EMT-I program curriculum. The Level II Instructor shall review all completed clinical and field internship student evaluations and determine when the student has demonstrated competency on each of the skills.

The educational program medical advisor and educational institution may also give credit for skills competency obtained from previous experience or other educational programs. The waiver of any skills for students in an EMT-I educational program should be reflected in the course outline materials on file at the educational institution.

The program medical advisor and Level II lead instructor may determine that the recommended minimum skills requirement for successful program completion is unattainable within the time allotted for clinical and field internship education. If this situation should occur, a joint decision of the program medical advisor and Level II lead instructor may reduce the required numbers of skills or increase the number of clinical and/or field internship hours. If the number of skills is reduced, the Level II instructor should develop an alternative method of ensuring competency in the skills necessary for successful program completion.

All patient assessments must be performed on patients in the clinical education and field internship components of the course.

PSYCHOMOTOR SKILLS

The student must demonstrate competency for all age groups in the following psychomotor skills:

| REQUIRED SKILL | | NUMBER TO BE PERFORMED | |
|-----------------------|---|--|------|
| | | Recommended Number (Required minimum) | |
| 1. | Medication administration | 15 | (15) |
| | <i>The following routes should be required:</i> | | |
| | a. Intravenous / Intraosseous | 8 | |
| | b. Intramuscular | 2 | |
| | c. Other (SQ, SL, ET, PO, Rectal) | 5 | |
| 2. | Tracheal intubation | 5 | (5) |
| | <i>Includes oral and nasal intubation</i> | | |
| | (*) Performed on patients during clinical or field internship | | (2) |
| 3. | Venous Access | 20 | (20) |
| | <i>Includes intravenous, venipuncture, arterial</i> | | |
| | (*) Performed on patients during clinical or field internship | | (10) |
| 4. | Ventilation of unintubated patients | 10 | (5) |
| | (*) Performed on patients during clinical or field internship | | (5) |

SUCCESSFUL SKILLS COMPLETION

AGES

The student must demonstrate competency in the assessment of patients in the following age groups:

| | AGE GROUP | NUMBER TO BE PERFORMED | |
|----|---|------------------------|--------------------|
| | | Recommended Number | (Required minimum) |
| 1. | Newborns, Infants, Toddlers, and School Age Pediatric patients (<i>Pediatric patients are age < 18 years old</i>) | 10 | (5) |
| 2. | Adults (<i>Adults are age 18 – 64 years old</i>) | 10 | (10) |
| 3. | Geriatric age patients. (<i>Geriatric patients are ≥ 65 years old</i>) | 10 | (5) |

PATHOLOGIES

The student must demonstrate competency in the assessment, treatment, and management of the following patient conditions:

| | PATHOLOGY | NUMBER TO BE PERFORMED | |
|----|-------------|---|--|
| | | (Note: There are no required minimum numbers) | |
| 1. | Obstetric | 5 | |
| 2. | Trauma | 10 | |
| 3. | Psychiatric | 5 | |

COMPLAINTS

The student must demonstrate competency in the ability to perform an assessment, formulate and implement a treatment plan for patients with the following complaints:

| | COMPLAINT | NUMBER TO BE PERFORMED | |
|----|--|---|--|
| | | (Note: There are no required minimum numbers) | |
| 1. | Chest pain | 10 | |
| 2. | Dyspnea / respiratory distress | 10 | |
| 3. | Syncope | 5 | |
| 4. | Abdominal complaints (i.e. Nausea/vomiting, GI bleed, gynecological complaint, etc.) | 5 | |
| 5. | Altered mental status | 5 | |

TEAM LEADER SKILLS

The student must demonstrate the ability to serve as a team leader in a variety of prehospital emergency situations.

| | SKILL | NUMBER TO BE PERFORMED | |
|----|---|------------------------|--------------------|
| | | Recommended Number | (Required minimum) |
| 1. | Team Leader (*) <i>May use a combination of classroom scenario and field internship experience</i> | 10 | (5) |

EMT-I EDUCATIONAL PROGRAM SUMMARY

The following represents a summary of the required components and recommended minimum time requirements for the EMT-I program:

| | |
|---|------------------|
| 1. Didactic, skills practice/evaluation, written exams, scope of practice | 160 hours |
| 2. Clinical Education, remediation | 48 hours |
| 3. Field Internship, remediation | <u>48 hours</u> |
| Total Recommended EMT-I Program Length | 256 hours |

REGISTRATION OF AN EMT-I EDUCATIONAL PROGRAM

To register an EMT-I program with the OEMS, the approved educational institution must submit a completed *Course Information Form* (DFS 1106) to the appropriate OEMS regional office.

The signature of the Educational Program Director certifies that the course meets all requirements set forth in the OEMS *Emergency Medical Technician-Intermediate (EMT-I) Curriculum*. **A course outline including course dates, instructional objectives and hours of instruction is not required for course approval; however, a copy of the course outline must be kept on file locally for compliance monitoring by the OEMS.**

The completed course information form must be received in the OEMS regional office at least 20 calendar days prior to the first class of the program. A notice of the approved course number will be mailed to the approved educational institution by the OEMS after receipt of the completed course information sheet.

| Western Regional EMS Office | Central Regional EMS Office | Eastern Regional EMS Office |
|--|--|--|
| 932 Old Hwy. 70 West Building #14 Black Mountain, NC 28711 | 120 Penmarc Drive, Suite 108 2717 Mail Service Center Raleigh, NC 27699-2717 | 404 St. Andrews Street Greenville, NC 27834 |
| Phone: (828) 669-3381 Fax: (828) 669-3387 | Phone: (919) 715-2321 Fax: (919) 715-0498 | Phone: (252) 355-9026 Fax: (252) 355-9063 |
| REGIONS: A, B, C, D, E, F | REGIONS: G, I, J, M, N | REGIONS: K, L, O, P, Q, R |

ORDERING INFORMATION

Forms and documents referenced in this curriculum guideline are available through links at the OEMS web site:

www.ncems.org